

**Adapter  
KTA Series  
User Manual**

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# 1. Introduction

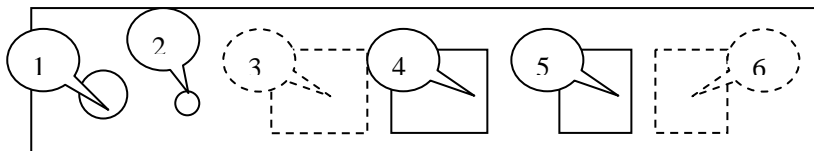
KTA series is one of VoIP terminal products, with one port connecting with regular PSTN terminal devices and one port connecting with Internet. It transfers voice through net. By the management of soft-switch platform and the support of telecom, KTA can communicate with VoIP terminals and dial to regular phone inexpensively.

KTA series' port

- KTA1000's port
  - One LAN port (10 Base-T)
  - One PC port (10 Base-T)
  - One PHONE port (FXS)
  - The relation between LAN port and PC port is not router but hub
- KTA1001's port
  - One LAN port (10 Base-T)
  - One PHONE port (FXS)
- KTA1010's port
  - One LAN port (10 Base-T)
  - One PC port (10 Base-T)
  - One PHONE port (FXS)
  - One LINE port (FXO)
  - KTA1010 has HUB function
  - The relation between LAN port and PC port is not router but hub
- KTA1011's port
  - One LAN port (10 Base-T)
  - One PHONE port (FXS)
  - One LINE port (FXO)

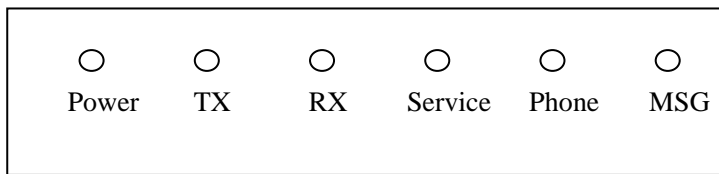
## 2. Sketch

### 2.1 Ports figure



- 1—Power Port
- 2—Setup Button
- 3—PC port :(10 Base-T Ethernet) RJ45 port to connect with PC (only for KTA1000, KTA1010)
- 4—LAN port:(10 Base-T Ethernet) RJ45 port to connect with Internet or Local Network
- 5—PHONE Port (FXS)
- 6—LINE Port (FXO) (only for KTA1010,KTA1011)

## 2.2 LED Indicators



Power—Power On LED

TX—Network data being transmitted

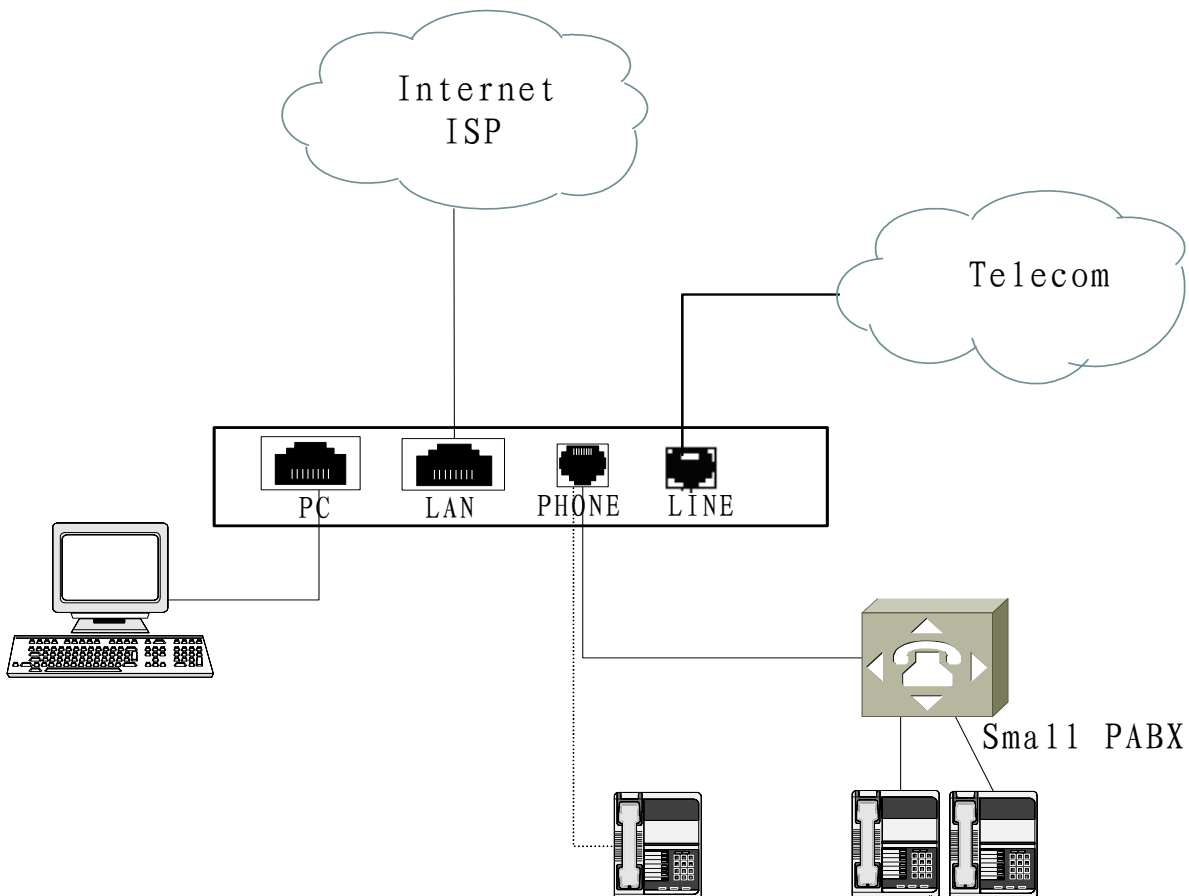
RX—Network data being received

Service—Service connected (Remains illuminated when successfully logged-on to server)

Phone—phone in operation (phone in-used when light on means working under VoIP, when light off means working under PSTN)

MSG—unanswered call LED (unanswered call appeared if light on)

## 2.3 Application figure



**Instruction:**KTA 1000,KTA1001 without LINE port,KTA1001,KTA1011 without PC port

## 3. Installation and Setting

### 3.1 Installation

- (1) Locate your KTA close to your Internet connection and a power outlet.
- (2) Plug the RJ-45 connector of the Ethernet 10/100Base-T cable into the KTA's side input port ④, and plug the other side into a hub or switch, or wall/ground socket of the structuring cable.

- (3) Plug one side of the RJ-11 of phone line to the PHONE Port(FXS) ⑤ of KTA, plug another side of the phone line into user terminal (phone, line entrance to PABX, etc.).
- (4) If you are the KTA1010, KTA1011's user, put the phone line to the LINE Port(FXO) ⑥ of KTA, you will have the both function of VoIP and PSTN.
- (5) Plug the accessory power-adaptor into the power outlet, then connect the output-plug to power-port ① of the KTA.
- (6) Then waiting for KTA's startup, after hearing short phone ring, KTA is now working.

**Notice: Please select different type of Ethernet Cable according to the network devices (devices connecting to LAN). Select Straight-through Ethernet Cable for network equipments (router, hub, etc.); Select Cross-over Ethernet Cable for the PC of ISP server; Select the corresponding Ethernet Cable according to the instructions of XDSL and Cable Modem (using Straight-through Ethernet Cable in most casts).**

## 3.2 Configuration

### 3.2.1 Configuring Network Parameters from Telephone Handset

Without PC, users and network technician can set parameter through ordinary phone and KTA, all those operations can be finished under VoIP model.

Instrucitons for network parameter setting:

Command Format:

Every configuration command from your telephone handset will be similar to the following format: **#\*xxxxx#**. Commands are a minimum of 3 digits. If a command is prefixed by **"#\*"** then the command is a query. If the command is prefixed by just **"#"** then it is a programming command. Use **"##"** to cancel a command.

If the command is successful you will hear "di du". If the command is unsuccessful you will hear "du du du..."

Common commands:

**Note: Each Command below is followed by its alphanumeric representation to make it easy to remember.**

Query IP Address: pick-up phone handset and key in **#\*047#** or **#\*OIP#**

Set IP address: pick-up handset and key in **#73847# xxx\*xxx\*xxx\*xxx#** or **#SETIP#xxx.xxx.xxx.xxx#**

Enable DHCP: pick-up handset, then key in **#3427#** or **#DHCP#**

Disable DHCP: pick-up handset, then key in **##3427#** or **##DHCP#**

Reboot: pick-up handset, then key in **#778#** or **#RST#**

Restore default settings: pick-up handset, then key in **#358#** or **#DLT#**

Using H.323: pick-up handset, then key in **#4323#** or **#H323#**

Using SIP: pick-up handset, then key in **#747#** or **#SIP#**

Using adjusting IP: pick-up handset, then key in **#3228#** or **#FACT#**. IP type is STATIC IP. IP address: 192.168.1.100, Gateway IP: 192.168.1.1, Subnet mask: 255.255.255.0.

**Note: After performing each of the above commands the KTA will reboot. You should wait until your telephone rings once to indicate that the reboot process has been completed.**

**Notice: DHCP is a default setting of KTA Series.**

### 3.2.2 Configuring Network Parameters from Web Browser

Open your web browser and enter the IP Address that has been assigned to the KTA (if necessary use the "Query IP Address" command in the above section). Log-in page will be displayed. The default password is 1234.

Browser, such as Microsoft Internet Explorer of Windows operating system, to set up parameters.

After network connection, please pick up handset, press key “#\*047#” to hear IP address of the adaptor box. In the address field of browser, type the IP address and press ENTER to display the Settings page. A log-in page will be shown. Enter log-in password to set parameters. The default password is 1234.

If adaptor box cannot get IP, enter “##3427# to cancel DHCP mode. After reset and beep sound heard, please pick up the handset, enter “#73847#xxx\*xxx\*xxx\*xxx#” to set IP address of adaptor box. Get the IP address and use browser to set up.

The screenshot shows a web-based configuration interface titled "Settings". It is divided into four main sections:

- Network Settings:** Contains fields for ip type (dropdown: dhcp), local ip (10.167.17.240), DNS (10.167.16.1), ppp id (pppid), subnet mask (255.255.254.0), DNS2 (202.96.199.133), ppp password (\*\*\*\*\*), gateway ip (10.167.16.1), and mac (00-09-45-0a-43-4e).
- Protocol Settings:** Contains fields for protocol (dropdown: h323), account (test018), service addr (10.167.16.8), phone number (40018), service port (1719), and pin (\*\*\*\*\*).
- Audio Settings:** Contains fields for audio type (dropdown: g729), VAD (checkbox), g7231 highrate (checkbox), AGC (checkbox), ring type (dropdown: pcmring), and AEC (checkbox).
- Other Settings:** Contains fields for access code (\*\*\*\*), use digitmap (checkbox), and sntp ip (216.53.3.44).

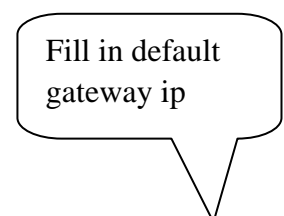
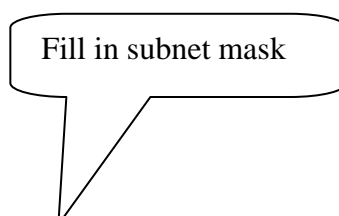
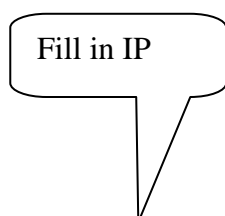
At the bottom, there are four buttons: "Save Settings", "Update Firmware", "Update Digitmap", and "Restore Defaults".

➤ Network Settings

Depending on the requirement of your ISP or Network you can configure the KTA with a Static IP, DHCP, or PPPoE:

This screenshot shows the "Network Settings" section of the configuration page. The "ip type" dropdown menu is open, showing three options: "static", "dhcp", and "pppoe". The "static" option is currently selected. The other fields in this section are: local ip (10.), subnet mask (255.255.254.0), gateway ip (10.167.16.1), DNS (10.), DNS2 (202.96.199.133), and mac (00-09-45-0a-43-4e).

**Static IP:** If your ISP / Network requires the use of a Static IP then you will be required to complete all of the parameters listed below:



iptype	static	ppp id		ppp password	
local ip	10.167.17.235	subnet mask	255.255.254.0	gateway ip	10.167.16.1
DNS	10.167.16.1	DNS2	202.96.199.133	mac	00-09-45-0a-43-4e

Fill in DNS

Fill in DNS2

**DHCP:** If your router (or other network device) is configured to allocate an IP address to the KTA automatically then you can simply set the KTA up for DHCP operation and no other network parameters need to be completed.

iptype	dhcp	ppp id		ppp password	
local ip	10.167.17.235	subnet mask	255.255.254.0	gateway ip	10.167.16.1
DNS	10.167.16.1	DNS2	202.96.199.133	mac	00-09-45-0a-43-4e

**PPPoE:** If your ADSL modem (or other network device) does not allow you to configure PPPoE then you may need to configure this in the KTA. You will need to enter your PPPoE Username (ID) and Password as follows:

Fill in PPPoE id

Fill in PPPoE psssword

iptype	pppoe	ppp id	pppoeid	ppp password	*****
local ip	10.167.17.235	subnet mask	255.255.254.0	gateway ip	10.167.16.1
DNS	10.167.16.1	DNS2	202.96.199.133	mac	00-09-45-60-60-60

mac	00-09-45-0a-43-4e
-----	-------------------

“mac” :display the KTA’s unique mac address

**Instruction:**if you can’t choose corresponding net link,please consult to network administrators or ISP,and you may know which method is your network using,and then ,make the right settings

➤ Protocol Settings

Select protocol:  
sip or h323

DNS or IP of the  
servicecarrier’s soft-switch

Service port:  
H323:1719(default)  
Sip:5060(default)

Protocol Settings					
protocol	h323	service addr	10.167.16.8	service port	1719
account	test018	phone number	40018	pin	*****

User name with  
service provider

Phone number

Pin

**Instruction: Depending on your service provider the KTA may display “gk zone” instead of “service address”.**

Protocol Settings					
protocol	h323	gk zone	zone0	service port	1719
account	test018	phone number	4001	pin	*****

**Notice: If login failed, contact your service carrier to adjust parameters. Do not adjust default value in most cases.**

➤ Audio Settings

Audio Settings					
audio type	g729	g7231 highrate	<input checked="" type="checkbox"/>	ring type	pcmring
VAD	<input type="checkbox"/>	AGC	<input checked="" type="checkbox"/>	AEC	<input checked="" type="checkbox"/>

Audio codec

- g729
- g7231
- g711u
- g711a
- auto

Ringtype

- pcmring
- dtmf2
- dtmf3
- dtmf4
- dtmf5
- dtmf6
- dtmf7
- dtmf8
- dtmf9
- not disturb
- pcmring
- user define

Voice active detection

auto gain control

auto echo cancellatio

Notice: All above audio parameters are default settings. Contact your operator to adjust the corresponding parameters if any problems. Please do not adjust these without the advice of your service provider.

➤ Other Settings

Other Settings			
access code	****	use digitmap	<input checked="" type="checkbox"/>
sntp ip	210.59.157.10		

adjust the login passport  
1234 is default value

IP address of network  
time server

Use Digitmap: Please leave this function turned on. The Digit map enables the KTA to recognize dialing sequences from around the world. If the user dials a recognized dialing sequence then the KTA initiates the call without the user having to press the # key after dialing.

**Notice: Enter #358# to restore factory(default value) if forget KTA login password. Password will restore to the default value, 1234.**



➤ Upgrade

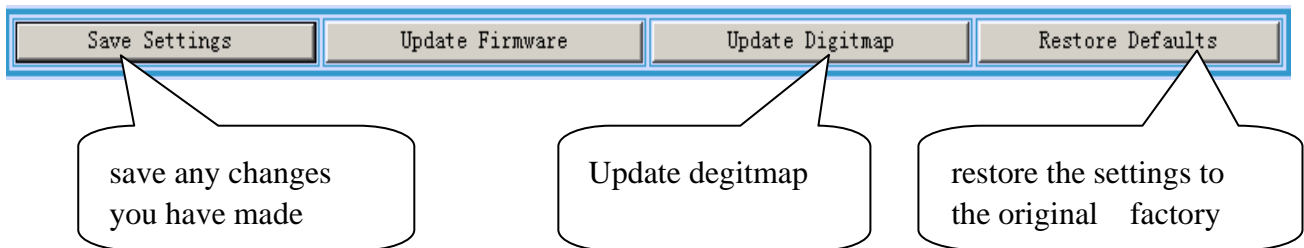
Click “Update Firmware” of the right-bottom of setting page.



KTA would automatically reboot after upgrading, then please press keys on the phone as #358# (#DLT#) to restore default settings and reboot again!

**Note: If you have been instructed to use the “Upgrade Tool” to perform the upgrade then you will need to enable “Remote Access Permission”. This is done from your telephone handset by dialing #767#. Please remember that after you have completed the upgrade then you should restore the KTA’s default settings by dialing #358# on your phone handset and then wait for the KTA to reboot.**

➤ Other buttons



## 4. Functions

- Making and Receiving calls
- Use Digitmap
- Call Forwarding

### 4.1 Making and Receiving calls

#### 4.1.1 Making outgoing calls

##### A. Calling VoIP

Every VoIP Terminal will be assigned a VoIP number. Users can directly call each other’s number.

Example: A user with the number 6667777 want to call another user with the number 7778888.

User 6667777 simply pick up the phone handset, waits for dial tone and dial 7778888 followed by #

##### B. Calling a regular phone

###### a) Calling a regular phone under PSTN

**Notice: Before this function can be realized, please plug the phone line into the KTA LINE port (FXO). And now the phone is a VoIP phone. (Only for KTA1010, KTA1011)**

Pick up the handset or press the “handfree” key, then press the key “\*” to change into the PSTN model. When you hear the dial tone, key in the PSTN phone number, after finishing calls, put down the handset, it automatically change to the VoIP model.

Under this situation, functions are carried out through KTA’s LINE port (FXO).

###### b) Calling regular phone under VoIP

**Notice: It is applicable to all KTA users**

Every KTA can call any land or mobile phone anywhere in the world. Please dial with the service carrier's dialing rule. Press “#” after you dial the phone number.

Example 1: If a U.S service carrier's dialing rule: To call a U.S or Canada number, please first dial 1, then the telephone number.

KTA user calling an U.S/Canada regular number 213-666-8888.

Pick up the handset, when you hear the dial tone key in 12136668888 followed by #.

Example 2: If a U.S service carrier's dialing rule: To call other countries' regular numbers, please first dial 011, then the country code (no '0' as prefix), and dial the telephone at last.

KTA user calling a China regular number 0755-88889999.

Pick up the handset, when you hear the dial tone key in 0118675588889999 followed by #

Example 3: If a China service carrier's dialing rule: To call other countries' regular numbers, please dial the district code, and dial the telephone at last.

KTA user calling a China regular number 0755-88889999.

Pick up the handset, when you hear the dial tone key in 075588889999 followed by #. Under this situation, functions are carried out through KTA's LAN port and PHONE port (FXS).

#### **4.1.2 Receiving**

##### **A. Receiving VoIP**

When there is a call from other VoIP, pick up handset or press "handfree" key.

##### **B. Receiving PSTN**

a) Notice: **the function is only for KTA1010, KTA1011 and please plugs the phone line provided by telecom to the KTA LINE port (FXO)**

Under this situation, when calls from the PSTN phone, the phone then automatically changes to the PSTN model, pick up the handset and the call can be successfully going on. Functions are carried out through KTA's LINE port (FXO).

b) Notice: **it is only for the users except from a)**

This is an optional service. Only areas that are provided access numbers allow calls from a regular phone to KTA. Please refer to 'Access Number List' on the Carrier Service page to see if this service is available in your area.

#### **4.2 Use digitmap**

After you choose "use digitmap" through the web, when you call the phone numbers all over the world, after dial the number, KTA can automatically dial out without pressing "#", just as under PSTN model. The rule will be defined by service carrier.

#### **4.3 Call Forwarding**

Every KTA has call forwarding feature, when the user is not online, the incoming call can be forwarded to a preset telephone number.

Settings:

Enter my account page on service website to set the forwarded number. The number must accord with service carrier's dialing rule.

## User Information

User ID	lyx77
IP Phone Number	7777777
Balance(US\$)	222.00
Status	Normal
Payment Option	Prepay

Company	<input type="text" value="234"/>
Contact Telephone Number	<input type="text" value="132132132"/>
Email	<input type="text" value="65465@ncuid.com"/>
Call forwarding number	<input type="text" value="16664747"/>

Please input the forwarding number

Please type in the target number, which will be forwarded to.

**Notice: Call forwarding target number must be a PSTN number, with more than 7 digits.**

Example 1: If a U.S service carrier's dialing rule: To forward to a U.S or Canada number, please first dial 1, then the telephone number.

KTA user wants to make a call forward to 213-666-8888, please fill in 12136668888.

Example 2: If a U.S service carrier's dialing rule: To forward to other countries' regular numbers, please first dial 011, then the country code (no '0' as prefix), and dial the telephone at last.

KTA user wants to make a call forward to 0755-88889999, please fill in 0118675588889999.

Example 3: If a China service carrier's dialing rule: To call other countries' regular numbers, please dial the district code, and dial the telephone at last.

KTA user want to make a call forward to 0755-88889999. KTA user can fill in 075588889999.

## 5. Technical Parameter

### 5.1 The electronic specifications

- Voltage: 12V DC, 500mA
- Power adapter: AD/DC input 100~120V (USA, Japan etc.) or 220~240V (China, Europe etc.) or 100~240V, 47-63Hz
- Network interface: IEEE 802.3 10 Base-T
- EMC: FCC Part15 CLASS B

### 5.2 Working/storing environment

- Operational temperature: 0 to 50° C (32° to 122° F)
- Storage temperature: -30° to 65° C (-22° to 149° F)

- Humidity: 10% to 90% no dew

### 5.3 Dimensions

- 166.4x 119x 31.6mm (L x W x H)

## 6. Frequent Problems and Solutions

Problems	Probably Causes	Solutions
Unacceptable voice quality under VoIP	Bandwidth < 30Kbps	Using in network environment as stable and qualified as you can.
	Unstable network quality: Delay>500ms or jitter>100ms or package loss>10%	
Login server failed (Service LED off)	Login failed by firewall	Check with the service center of service carrier.
	Network provided by ISP and the ISP restricts login	
	Incorrect account information or phone number	Using initial account to reset account number, pin and phone number. If the pin had been changed, asking the service carrier.
	Incorrect server address	If server address had been changed, asking the service carrier.
Failed to receive and dial the PSTN phone through the phone line provided by the Telecom service carrier	Phone line provided by the Telecom service carrier is not be plugged to the KTA LINE port (FXO)	Plug the phone line to the KTA LINE port (FXO)
	Incorrect dialing method	Please dial the “*”key before call, then you can choose the phone line as the dial-out line
Login succeeded (service led on), can't use phone: after picking up handset you cannot hear dial tone, or press key without sound	Some wrong with KTA momentarily	Press “#778#” (#RST#) to restore KTA,then reuse

## 7. Appendix

### 7.1 Features

- Basic Port—— One or two RJ45 ports compatible with IEEE 802.3 10 Base-T, one FXS port, one FXO port (KTA1010, KTA1011)
- AC/DC adapter— input 100~120V (USA, Japan etc.) or 220~240V (China, Europe etc.) or 100~240V, 47-63Hz
- Log-in to specific soft-switch platform
- Automatic searching for soft-switch platform
- Supports DHCP: Automatically obtain local IP, subnet mask, router IP
- Supports PPPoE

- Voice active detection
- Comfortable noise generation
- Echo cancellation
- Dynamic buffer management—minimize effect to voice quality caused by audio delay jitter
- Supports NAT
- Supports H.323/SIP
- Supports Remote Upgrade
- Supports Call Forwarding
- Lightningproof

## 7.2 Standards and agreements

- IEEE 802.3 10 Base-T
- G.711A, G.711 $\mu$ , G.723.1 5.3K/6.3 Kbps and G.729 audio codec
- H.323 v2 and SIP
- TCP/IP: Internet Transport and Control Protocol
- RTP: Real-time Transport Protocol
- RTCP: Real-time Control Protocol
- VAD/CNG Voice active detection/comfortable noise generation
- G.165 Echo cancellation
- DTMF Tone Generate and Detection
- DHCP: Dynamic Host Configuration Protocol
- PPPoE: Point to Point Protocol of Ethernet
- DNS: Domain Name Server
- FTP: File Transfer protocol
- HTTP: Hyper Text Transfer protocol

## 7.3 Recommend usage net condition

- Delay: Less than 400ms
- Jitter: Less than 100ms
- Package loss: Less than 10%
- Bandwidth: More than 30Kbps

## 7.4 Commands For Setting Network Parameters

Query IP Address: #\*047# or #\*0IP#

Set IP address: #73847# xxx\*xxx\*xxx\*xxx# or #SETIP “#xxx.xxx.xxx.xxx#”

Enable DHCP: #3427# or #DHCP#

Disable DHCP:##3427# or ##DHCP#

Reboot: #778# or #RST#

Restore default settings: #358# or #DLT#

Using H.323: #4323# or #H323#

Using SIP: #747# or #SIP#

Using adjusting IP #3228# or #FACT#.

**Safety Warning: Please do not place this product near open flame or high temperature. Avoid heavy**

**impact, and do not leave the product in damp or highly humid conditions!**

**Current user manual is made based on the functions of present products, if any content change has made, no further notice.**